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08/869,589 06/05/97 STROLLE C SAR-12082

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EXAMINER

BURD, K

ART UNIT

PAPER NUMBER

2734

DATE MAILED:

02/18/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/869,589

Applicant(s)

Strolle

Examiner

Kevin Burd

Group Art Unit

2734



☒ Responsive to communication(s) filed on 11/23/99

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-16 is/are pending in the application

Of the above, claim(s) _____ is/are withdrawn from consideration

☒ Claim(s) 11 is/are allowed.

☒ Claim(s) 1, 9, 10, 12, 15, and 16 is/are rejected.

☒ Claim(s) 2-8, 13, and 14 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s) _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

Response to Arguments

1. This action, in response to the arguments filed 11/26/99, is a non-final rejection.
2. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

4. Claims 1, 9, 10, 12, 15 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Norrell et al (US 5,793,821).

Regarding claims 1 and 12, Norrell et al (Norrell) disclose an apparatus for equalizing the amplitudes of a signal (column 7 line 65 to column 8 line 2) comprising:

a timing interpolation filter (figure 5 item 504) for providing samples for the upper and lower bandedge filters (column 8 lines 7-14);

upper and lower bandedge filters (figure 5 items 508 and 512) which extracts the bandedge signal; and

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a signal processor (figure 5 item 518-530 and column 8 lines 50-67) which provides a control signal to the filters to remove noise and interference to compensate for the amplitude distortions.

Regarding claim 9, 10, 15 and 16, Norrell further discloses an apparatus and method for equalizing the amplitudes of the bandedges of a broadband signal as stated above in paragraph 4. Through the course of compensating for the effects of amplitude distortion, the bandedge signals must be attenuated and amplified.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 9, 10, 12, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gitlin et al (US 4,253,184).

Regarding claims 1 and 12, Gitlin et al [Gitlin] discloses an apparatus for equalizing the amplitudes of a signal comprising:

an equalizer (column 3 lines 51-56 and figure 1 items 11-14, 16 and 33) for adjusting the amplitudes of the signal in response to a control signal (figure 1);

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a filter (figure 1 items 17-19, 20 and 21) which recovers the baseband data (column 3 lines 33-36); and

an upmodulator (figure 1 item 26) connected to the post-equalizer and decision circuit, for generating control signals in response to the difference of the output signals of a post-equalizer and recovered baseband data (figure 1).

Gitlin does not disclose the use of bandedge signals in the above apparatus. However, if the baseband filters of the equalizer and the post-equalizer were replaced with bandedge filters, the bandedges would be recovered instead of the baseband information. The bandedge's timing signal jitter could be reduced just as the timing jitter is reduced in the above reference. Therefore it would have been obvious for one of ordinary skill in the art at the time of the invention to replace the baseband filters of the equalizers with bandedge filters to reduce the signal jitter of the bandedges.

Regarding claim 9, 10, 15 and 16, Gitlin further discloses an apparatus and method for equalizing the amplitudes of the bandedges of a broadband signal as stated above in paragraph 4. Through the course of compensating for the effects of amplitude distortion, the bandedge signals must be attenuated and amplified.

Allowable Subject Matter

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7. Claims 2-8, 13 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claim 11 is allowed.

9. The following is a statement of reasons for the indication of allowable subject matter:

None of the cited references fails to teach the further arrangement of the band edge signal processor, the apparatus for equalizing the amplitudes of the bandedges of the broadband signal and the method for equalizing the amplitude of the bandedges of the broadband signal as recited in the claims 2, 3, 4, 5, 6, 7, 13 and 14 and the equalizer having the form as stated in claim 8.

Claim 11 is allowable because none of the cited references teach the arrangement of pre-equalizer, bandedge filter, a first Hilbert filter, a second Hilbert filter, a first magnitude processor, a second magnitude processor, a subtractor and a loop filter in order to form the apparatus for equalizing the amplitudes of the bandedges of a broadband signal as recited in claim 11.

Conclusion

10. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

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or faxed to:

(703) 308-9051, (for formal communications intended for entry)

Or:

(703) 308-6743, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Burd, whose telephone number is (703) 308-7034.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4900.



Kevin M. Burd
PATENT EXAMINER
February 14, 2000



TEMESGHEM GHEDREM
PRIMARY EXAMINER